

# **STRUCTURAL INTEGRITY ASSESSMENT**

for

Kemron Environmental Services  
1359-A Ellsworth Industrial Boulevard  
Atlanta, Georgia 30318

- Location -

Deferiet Paper Mill Site  
400 Anderson Avenue  
Deferiet, New York

**March 2021**

Prepared By:



1667 Lake Avenue  
Building 59, Suite 101  
Rochester, New York 14615  
585-313-9683

## Table of Contents

	<u>Page</u>
EXECUTIVE SUMMARY	1
1.0 INTRODUCTION .....	2
1.1 General .....	2
1.2 Project Objectives .....	2
1.3 Report Organizations.....	3
2.0 Project Overview	
2.1 General .....	4
2.2 Site History .....	4
3.0 STURCTURAL INTEGRITY ASSESSMENT	
3.1 General .....	5
3.2 Company Garage .....	5
3.3 Easement .....	5
3.4 Turbine Room .....	5
3.5 Boiler Room .....	6
3.6 Machine Room.....	6
3.7 Equipment Room.....	6
3.8 Wet/Beater Room .....	6
3.9 Brookfield Building/Shared Walls .....	7
4.0 Summary	
4.1 Conclusions and Recommendations .....	8

## Appendices

Appendix A – Site Map  
Appendix B – Photographs  
Appendix C – Engineer Certification

## **EXECUTIVE SUMMARY**

This report has been prepared to summarize structural integrity evaluation for the Deferiet Paper Mill property located at 400 Anderson Avenue in Deferiet, New York (subject property or Site). The work was completed by NEU-VELLE LLC (NEU-VELLE) on behalf of Kemron Environmental Services

The inspection was conducted on March 23, 2021 to document any noticeable changes to the structures following the October 14, 2020. NEU-VELLE conducted the inspection of the Site buildings to provide judgement on the structural integrity of buildings located at the Site to allow for safe access and future asbestos abatement activities.

Based on review of the site, it is NEU-VELL's professional judgement that there has not been any significant change to the structures since the October 14, 2020 site inspection. As documented in the previous report, the majority (areas of concern are noted in the report) of the areas within the Site (with the exception of the Wet/Beater Room wall adjacent to the canal and a portion of the second floor in the machine room) have adequate structural integrity to allow for the safe removal of asbestos containing material without the need for additional structural supports. However, as stated in the previous report, the site is in major disrepair (i.e., debris, openings in floors, partial demolition, cracked concrete, loose bricks, hanging pipes, etc.) and all areas of the buildings and site could not be adequately accessed. Therefore, caution should be taken when working in and around these areas to avoid injury.

## Section 1

NEU-VELLE, LLC.

---

## Introduction

## **1.0 Introduction**

---

### **1.1 General**

This report has been prepared by NEU-VELLE, LLC. (NEU-VELLE) to document the findings of a structural integrity assessment conducted on March 23, 2021 for the Deferiet Paper Mill located at 400 Anderson Avenue in Deferiet, New York. The assessment was conducted to evaluate if there were any notable changes to the site structures (i.e., buildings) following the October 14, 2020 inspection, and to provide judgement on the building's structural integrity for future access to conduct asbestos abatement activities, as necessary.

### **1.2 Project Objectives**

The purpose and objective of the assessment includes the following:

- The professional judgement relating to the structural integrity of the following buildings: Turbine Room, Boiler Room, Sulfite Room, Machine Room (and connected structures), Wet/Beater Room, Easement (and elevated Electrical Room), shared walls of the Brookfield building, and Company Garage;
- Determinations for each building of whether safe removal of bulk loose asbestos can occur;
- Determinations for each building of whether safe abatement of asbestos pipe insulation can occur;
- Determinations for each building of whether safe encapsulation of asbestos insulation can occur;
- Determination for each building of whether stabilization activities could be performed to allow abatement and what those stabilization activities would entail;
- Evaluation of all common walls with the Brookfield building to determine what, if any, stabilization activities would be required to ensure protection of the Brookfield building;

- Estimated distances to stop work as to not impact the Brookfield facility; and
- Evaluation of all walls along the Power Canal to determine what, if any, stabilization activities of structures (including bridges, piping, buildings, etc.) would be required to ensure protection of the Power Canal.

### **1.3 Report Organization**

This report presents the findings from the site inspection and structural evaluation activities. Section 2 provides a general overview of the investigation activities and areas inspected. Section 3 provides information on each area as well as the condition and evaluation of structural integrity. Section 4 presents our conclusions and recommendations regarding the interpretation and findings as a result of the inspection and evaluation.

## Section 2

NEU-VELLE, LLC.

---

### Project Overview

## **2.0 Project Overview**

---

### **2.1 General**

This section presents the approach and methodology used in performing the structural integrity assessment of the on-site buildings. In order to meet the objectives of the project, a walk-through and inspection of the buildings was conducted at the site on March 23, 2021 that included the following:

- Review of the Site;
- Review of current and past Site operations;
- Review of future Site activities; and
- Walk-through of accessible areas of the Site.

The following subsections describe the details with respect to the above noted activities.

### **2.2 Site History**

Prior to entering the site, Kemron and the on-site United States Environmental Protection (USEPA) representatives provided a brief overview of the site and proposed Site activities. According to Site Representatives, the Deferiet Paper Mill site is an inactive paper mill that has been in operation since approximately 1899. The site has numerous buildings and an operating hydroelectric plant which is currently being operated by Brookfield Renewable Power, LLC. Following closure of the paper mill in 2004, various entities have owned the property and in 2012 the site was purchased by Deferiet Development, LLC for the recovery and salvage of stainless steel, brass and other valuable metals. In addition, Deferiet Development initiated the dismantlement of the site buildings in an effort to recover pipes for salvage value. These activities have left the Site in disarray exposing asbestos containing materials to the environment. From 2016 to October 2018, the USEPA implemented activities at the site to apply encapsulants on asbestos-containing pipe to protect Brookfield Renewable Energy Group employees as well as the public from asbestos exposure. In August 2020, an Action Memorandum was signed to allow for the mitigation of asbestos-containing materials throughout on-site buildings that were partially demolished exposing the material to the environment. A map of the site is presented in Appendix A.



## **Section 3**

NEU-VELLE, LLC.

---

# **Structural Integrity Assessement**

## **3.0 Structural Integrity Inspection**

---

### **3.1 General**

Accompanied by Kemron and USEPA representatives, NEU-VELLE conducted a walk-thru of accessible buildings/areas of the Site. The following areas were inspected. A brief description of the area and judgment of the structural integrity is presented below. Representative photographs of the areas inspected are presented in Appendix B.

- Company Garage
- Easement
- Turbine Room
- Boiler Room
- Machine Room
- Equipment Room
- Wet/Beater Room
- Shared Walls with the BrookField Building

### **3.2 Company Garage**

The Company Garage is a single-story concrete block/brick and steel support structure of approximately 10,000 square foot in size. Based on inspection of the building, there was no significant change from the previous inspection and the structure is in generally good condition with no obvious structural integrity issues observed. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this area. However, there is an interior masonry block room constructed within the building which shows signs of failing (shifting joints and blocks). Any work within or near this interior room should not be conducted and care should be taken if working in the area.

### **3.3 Easement**

As indicated previously, the site currently has an active hydroelectric plant which is operated by Brookfield Renewable Power, LLC. An access route to the Brookfield plant is provided by an easement area that runs approximately north to south through the plant site. Based on inspection of the easement area, there was no significant change from the previous inspection and the structures are in generally good condition with no obvious exterior structural integrity issues observed. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this area. However, care should be taken in areas of loose brick on various areas of the structures during work activities.

### **3.4 Turbine Room**

The Turbine Room is a multi-story brick and steel support structure of approximately 6,000 square foot in size. Based on inspection of the building, there was no significant change from the previous inspection, and the structure is in generally good condition with no obvious structural integrity issues observed other than that there has been brick removed on the second floor of the structure to apparently gain access to the interior of the structure for equipment removal. It is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block, overhanging equipment (i.e., piping, etc.), and floor openings.

### **3.5 Boiler Room**

The Boiler Room is a multi-story brick and steel support structure of approximately 32,000 square foot in size. Based on inspection of the building, there was no significant change from the previous inspection and the structure is in generally good condition with no obvious structural integrity issues observed other than areas of loose brick throughout the structure. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block, overhanging equipment (i.e., piping, etc.) floor openings.

### **3.6 Machine Room**

The Machine Room is a mainly one-story brick and steel support structure of approximately 25,000 square foot in size. Based on inspection of the building, there was no significant change from the previous inspection and the structure is in generally good condition with no obvious structural integrity issues observed other than areas of loose brick/block throughout the structure. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block or overhanging equipment (i.e., piping, etc.).

### **3.7 Equipment Room**

The Equipment Room is a multi-story brick and steel support structure of approximately 25,000 square foot in size. Based on inspection of the building, there was no significant change from the previous inspection and the structure is in generally good condition with no obvious structural integrity issues observed other than the area has undergone demolition activities and areas of the building are collapsed. In addition, there are portions of the second floor that have deteriorated and should be supported if working in the vicinity of these areas. Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation could be accomplished in this building as long as care is taken in areas where there is loose brick/block, collapsed roof and/or floor structures, or overhanging equipment (i.e., piping, etc.).

### **3.8 Wet/Beater Room**

The Wet/Beater Room is a one-story brick and steel support structure of approximately 30,000 square foot in size. It is located adjacent to the Brookfield Renewable Power which shares a common wall with this area/room. Based on inspection of the building, there was no significant change from the previous inspection and the majority of the structure is in generally good condition with no obvious structural integrity issues observed. However, the wall adjacent to the Canal shows significant signs of foundation deterioration in the area just adjacent to the power plant. Based on previous discussions from Brookfield Renewable Power representatives, significant settlement and deformation of the foundation has been observed (underwater visual inspection, etc.). Therefore, it is NEU-VELLE's judgement that safe removal of bulk or loose asbestos and/or encapsulation should not be conducted within 50 feet of this wall. In addition, based on inspection of the foundation in this area, NEU-VELLE does not believe that temporary shoring and/or supports should be used to protect the structure from collapse. It is recommended that a thorough underwater inspection of the foundation be conducted to design a remedy for this area, or it be properly raised. However, other areas of the building can be safely entered as long as care is taken

in areas where there is loose brick/block, collapsed roof and/or floor structures, or overhanging equipment (i.e., piping, etc.).

### **3.9 Brookfield Building/Shared Walls**

The Brookfield Renewable Power Plant building is a multi-story brick and steel support structure of approximately 15,000 square foot in size. It is located adjacent to the Wet/Beater Room. Based on inspection of the building (inspection was only conducted from the Wet/Beater Room), there was no significant change from the previous inspection and the structure is in generally good condition with no obvious structural integrity issues observed. In addition, the common wall between the plant and the Wet/Beater appears to be in generally good condition with no apparent structural issues. However, as indicated above, the wall adjacent to the Canal shows significant signs of foundation deterioration in the area just adjacent to the power plant. In the event that this wall's foundation becomes increasingly compromised, failure of the Wet/Beater Room wall could occur and compromise the structural integrity of the Brookfield Renewable Power Plant. Therefore, it is recommended that a thorough underwater inspection of the foundation be conducted to design a remedy for this area, or it be properly raised.

## **Section 4**

NEU-VELLE, LLC.

---

### **Conclusions and Recommendations**

## **4.0 Summary**

---

### **4.1 General**

This section summarizes the interpretation of the field data and associated findings obtained during the site inspection.

### **4.2 Conclusions and Recommendations**

Based on review of the site, it is NEU-VELL's professional judgement that the majority (areas of concern are noted in the report) of the areas within the Site have adequate structural integrity to allow for the safe removal of asbestos containing material without the need for additional structural supports. As indicated, the site is in major disrepair (i.e., debris, openings in floors, partial demolition, cracked concrete, loose bricks, hanging pipes, etc.) and all areas of the buildings and site could not be adequately accessed. Therefore, caution should be taken when working in and around the site.

However, it is NEU-VELLE's judgement that the Wet/Beater Room wall adjacent to the Brookfield Power Plant is not safe and work should not be conducted within 50 feet of this wall. In addition, based on inspection of the foundation in this area, NEU-VELLE does not believe that temporary shoring and/or supports should be used to protect the structure from eventual collapse. It is recommended that a thorough underwater inspection of the foundation be conducted to design a permanent remedy for this area, or it be properly raised.

## Appendix A

NEU-VELLE, LLC.

---

## Site Map

## SITE MAP





## **Appendix B**

NEU-VELLE, LLC.

---

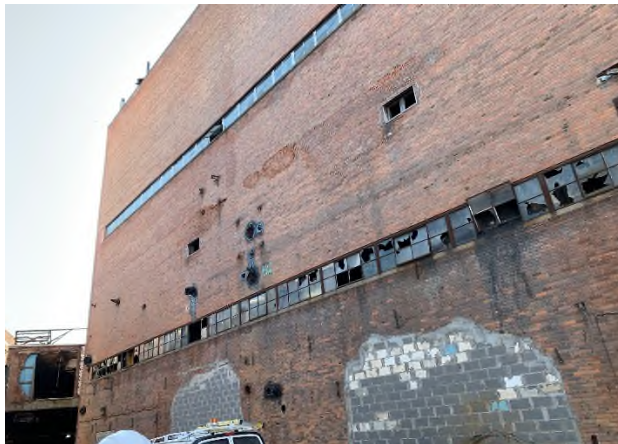
## **Photographs**

## Company Garage





## Easement



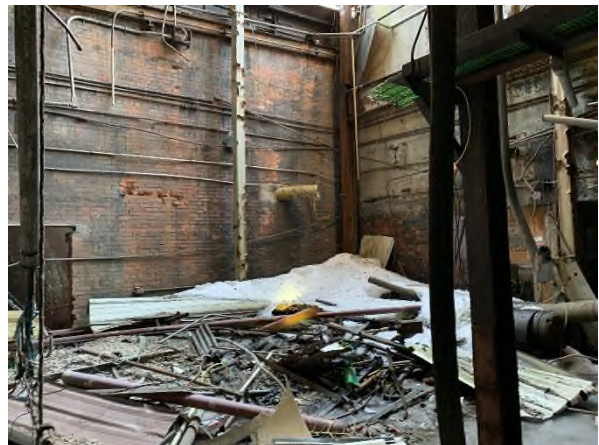
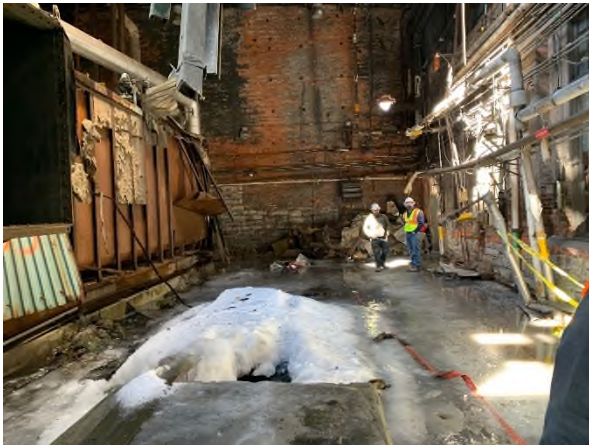


## Turbine Room



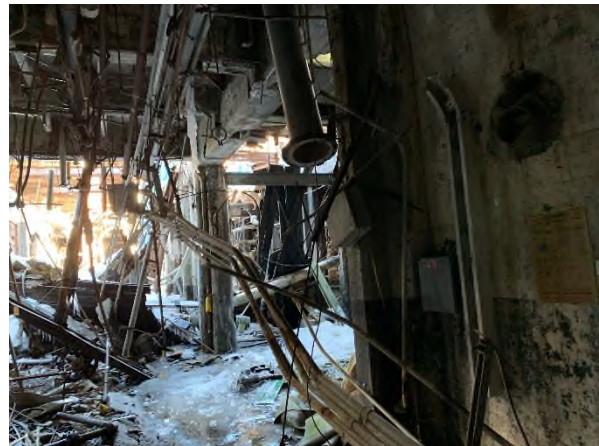


## Boiler Room

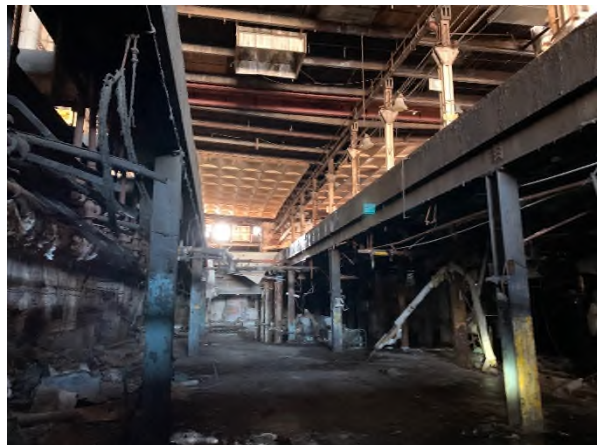




## Machine/Equipment Rooms

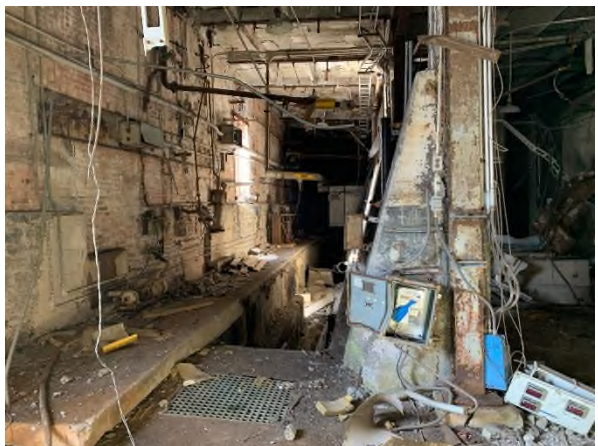
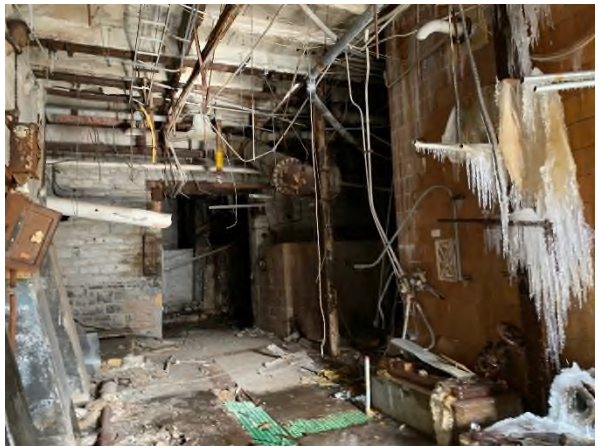






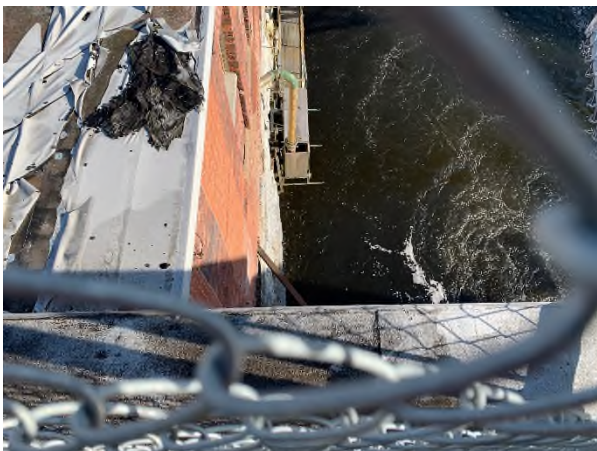
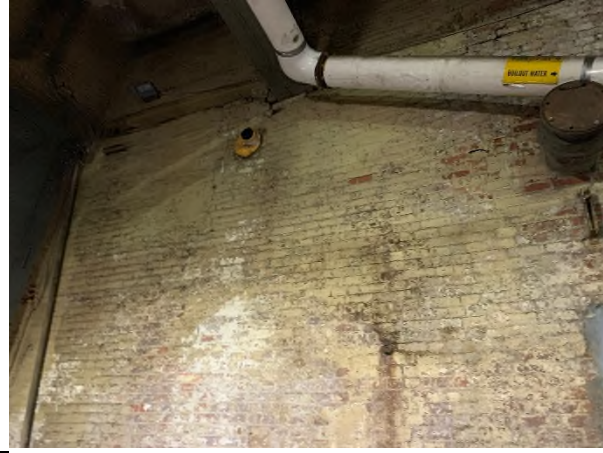


## Wet/Beater Room





**Brookfield Building & Shared Walls**  
**(Photos from October 14, 2020)**



## **Appendix C**

NEU-VELLE, LLC.

---

### **Engineer Certification**

## STRUCTURAL INTEGRITY ASSESSMENT

Deferiet Paper Mill  
400 Anderson Avenue  
Deferiet, New York

### ENGINEER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.



Albert G. Lyons Jr., P.E.  
NEU-VELLE LLC

3/26/21  
Date